

# BRIDGING THE GAP BETWEEN PUBLIC HEALTH & PLANNING



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# TODAY'S GOAL

- To bridge the gap between planning and public health.
- Recognize the connection between people's health and their physical environment.
- Collaborate and learn how we can work better with one another to foster healthier communities.



Today.....  
Think Health





# DEFINING PUBLIC HEALTH

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

-World Health Organization (WHO)1948

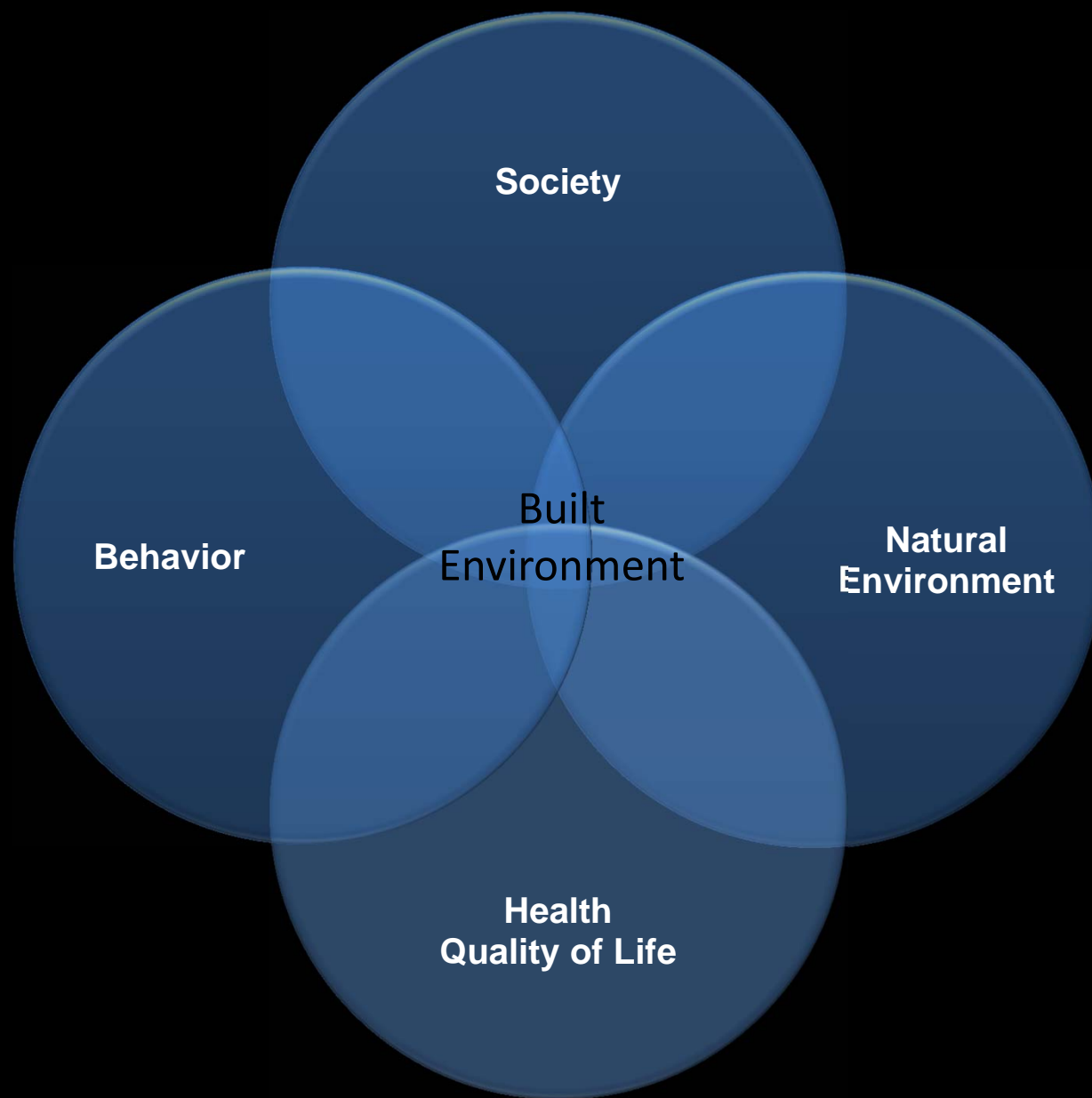
(This definition has not been amended since 1948)

The term “built environment” refers to the structures and facilities that we build in urban and suburban areas, as a part of the pattern we use in our current civilization.

*Source: Planning the Built Environment, Larz T. Anderson (2000)*



# THE RELATIONSHIP



*Source: Robert Wood Johnson Foundation*

## DETERMINANTS OF HEALTH

**Health is determined by factors including age, gender, heredity, behavior, culture, economic and social contexts.**

**Genetics 20-30%**

**Health care 10%**

**Social/environmental conditions and behavior 60-70%**

# The Planning Profession is Rooted in Public Health

## A History Example....

1864 – New York Council of Hygiene of the Citizens Association mounts a campaign to raise housing and sanitary standards.

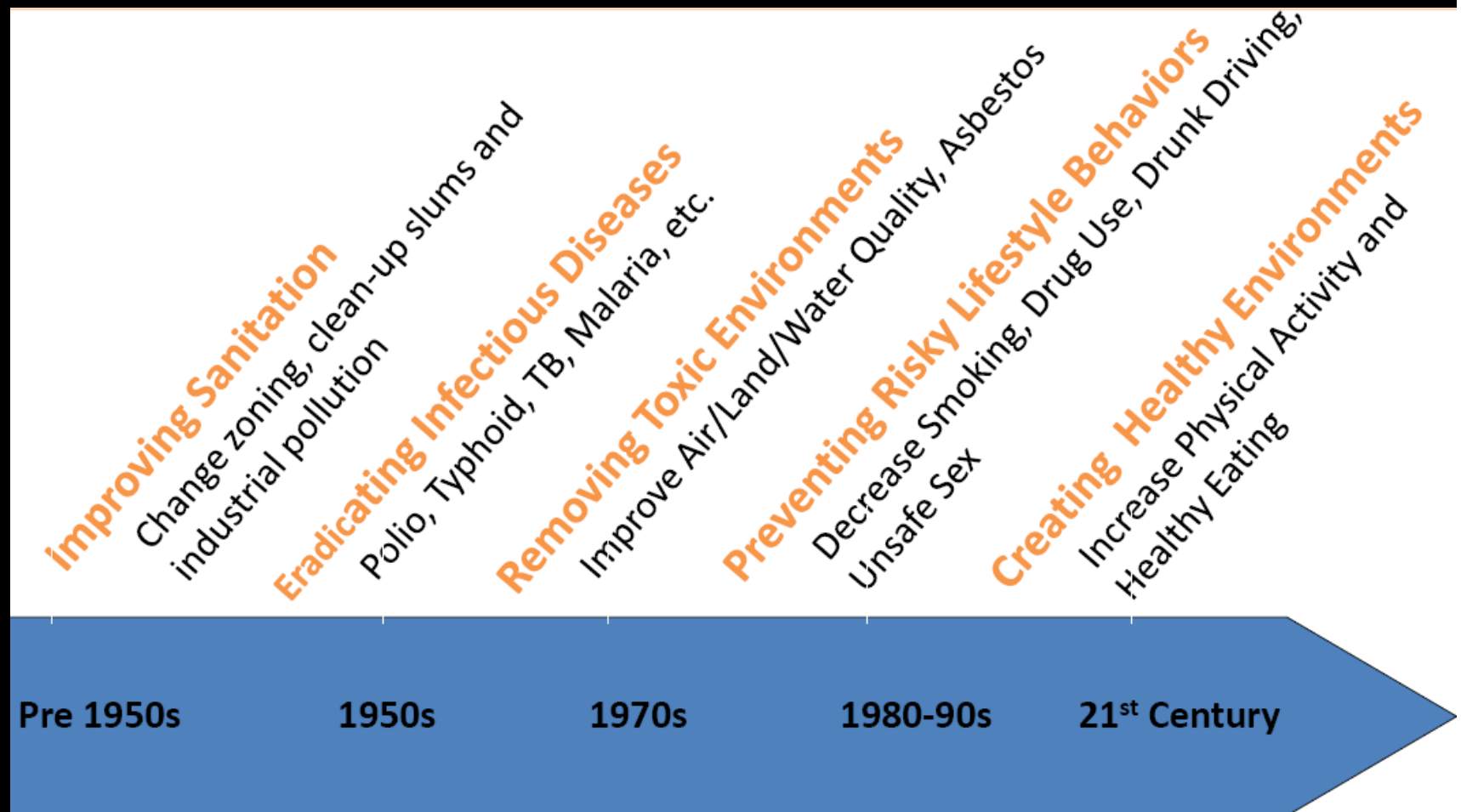
1879 - Debut of the "Dumbbell Tenement," so called because of its shape. A form of multifamily housing widely built in New York until the end of the century and notorious for the poor living conditions it imposed on its denizens (lack of light, air, space).

1901 - New York State Tenement House Law. The legislative basis for the revision of city codes that outlawed tenements such as the "Dumbbell Tenement."

*Source: American Planning Association  
Photo - [affordablehousinginstitute.org](http://affordablehousinginstitute.org)*



## Public Health Change 1950-2010



Source: [www.activelivingbydesign.org](http://www.activelivingbydesign.org)

# PUBLIC HEALTH CONCERNS



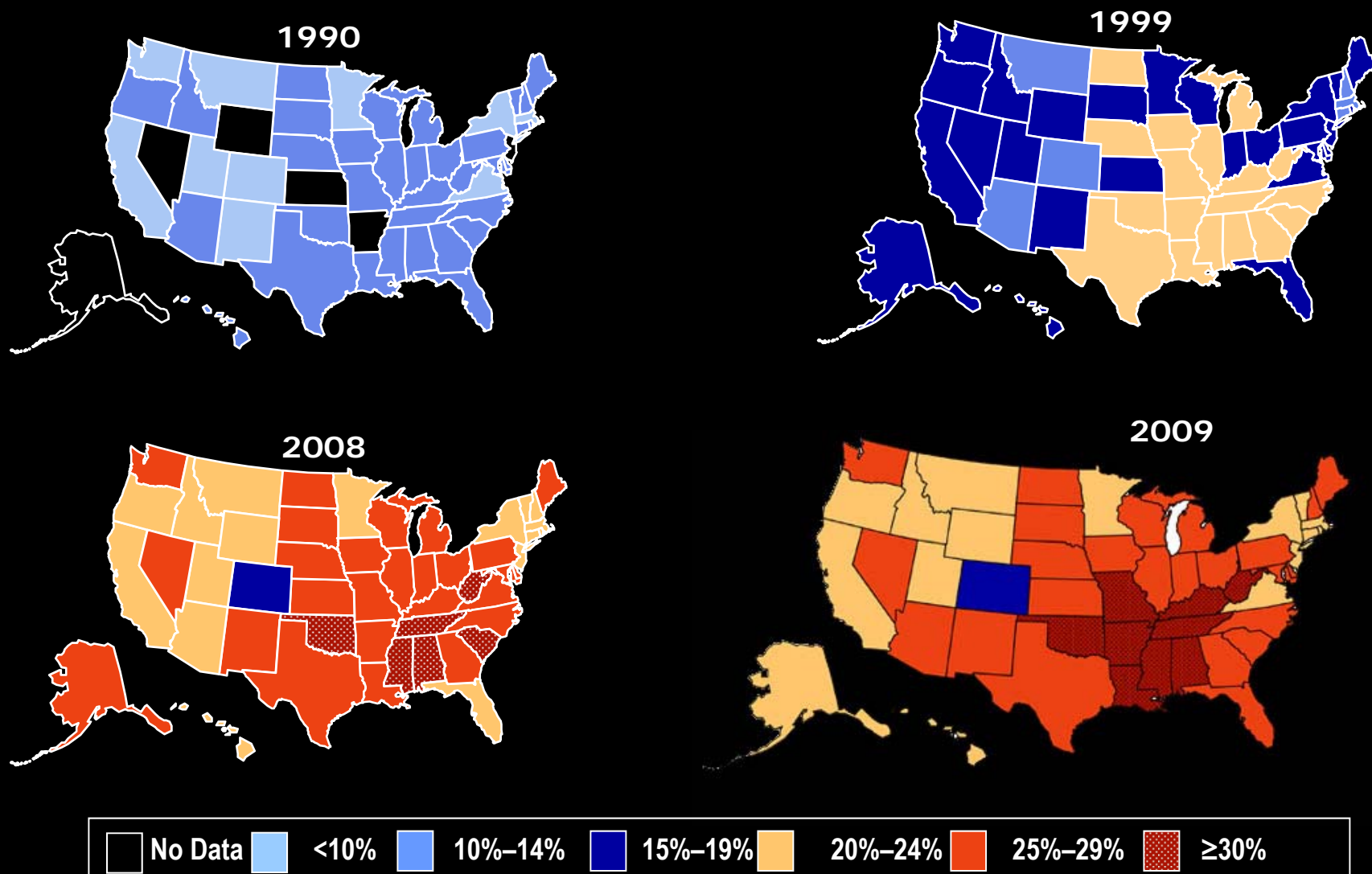
## UNDERSTANDING TODAY'S ENVIRONMENT

- Obesity
- Aging Demographics
- Infrastructure Needs
  - Climate Change

## Obesity Trends\* Among U.S. Adults

**BRFSS, 1990, 1999, 2008, 2009**

(\*BMI  $\geq 30$ , or about 30 lbs. overweight for 5'4" person)



# PUBLIC HEALTH CONCERNS

## THE FACTS

- In Wisconsin, 31% of children ages 2-4 years are reported as being overweight or obese.
- Only about 25% of the U.S. adult population complies with the recommended five or more servings of fruits and vegetables each day.
- Poor eating habits often develop during childhood. Greater than 60% of youth eat too much fat.



## Unhealthy Eating

- Heart Disease and Stroke
- Overweight and Obesity
- Type 2 Diabetes
- Some cancers
- Osteoporosis



## ACTIVE LIVING

- According to the U.S. Surgeon General's office, moderate physical activity, even taking in 10-minute increments, reduces health risks for adults:
  - Coronary heart disease
  - Stroke
  - Colon and breast cancer
  - Osteoarthritis
  - High blood pressure
  - Hypertension
  - Diabetes
  - Obesity



A national study found that 27 percent of health care charges for adults over age 40 are associated with people being physically inactive, overweight and/or obese.

Per capita private health insurance spending for obese adults was \$1,272 higher than that for normal weight adults in 2002.

*Source: Active Early – A Wisconsin guide for improving childhood physical activity:*

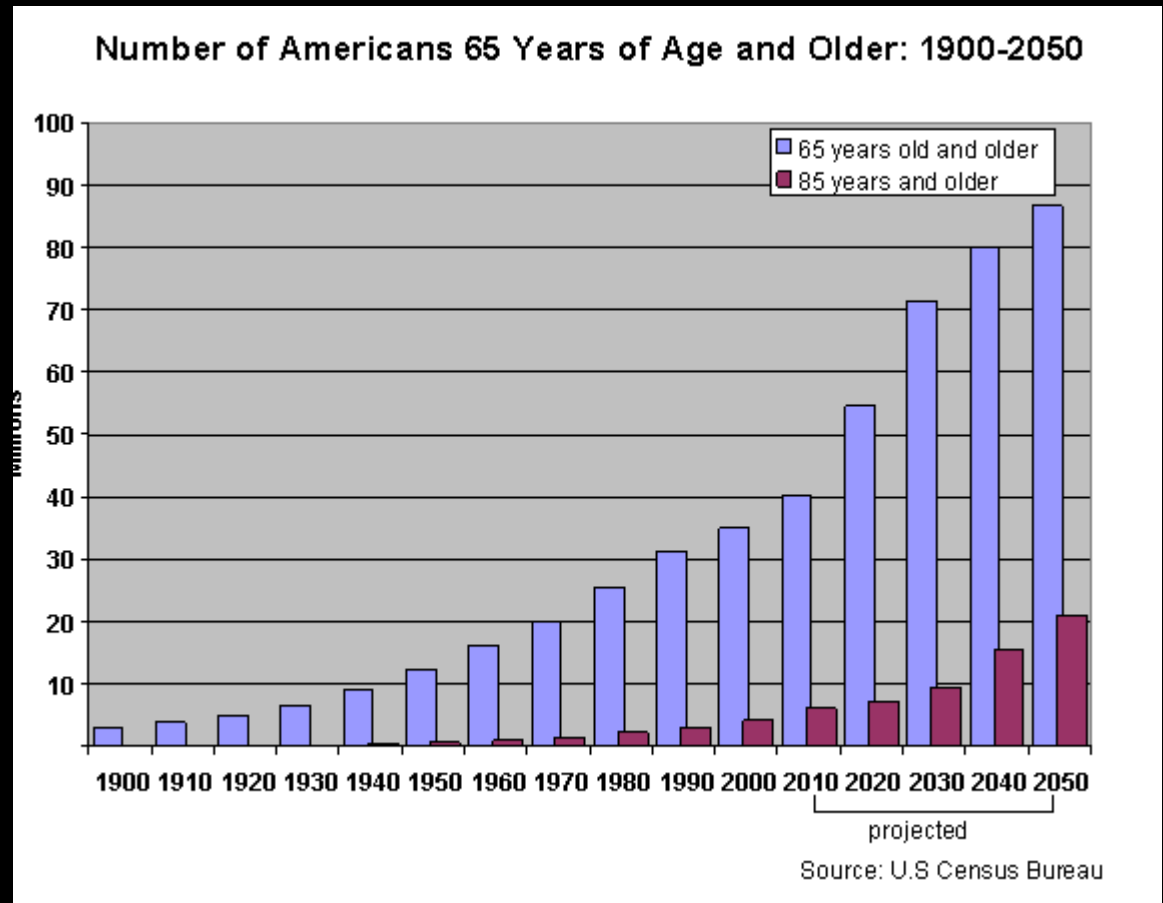
<http://www.dhs.wisconsin.gov/publications/P0/P00280.pdf> - Aging and Disability Resource Center of Eau Claire County

*American Society of Landscape Architects - The Sustainable Sites Initiatives – The Case for Sustainable Landscapes (2009)*

*Minnesota Dept. of Health – State Health Improvement Program*

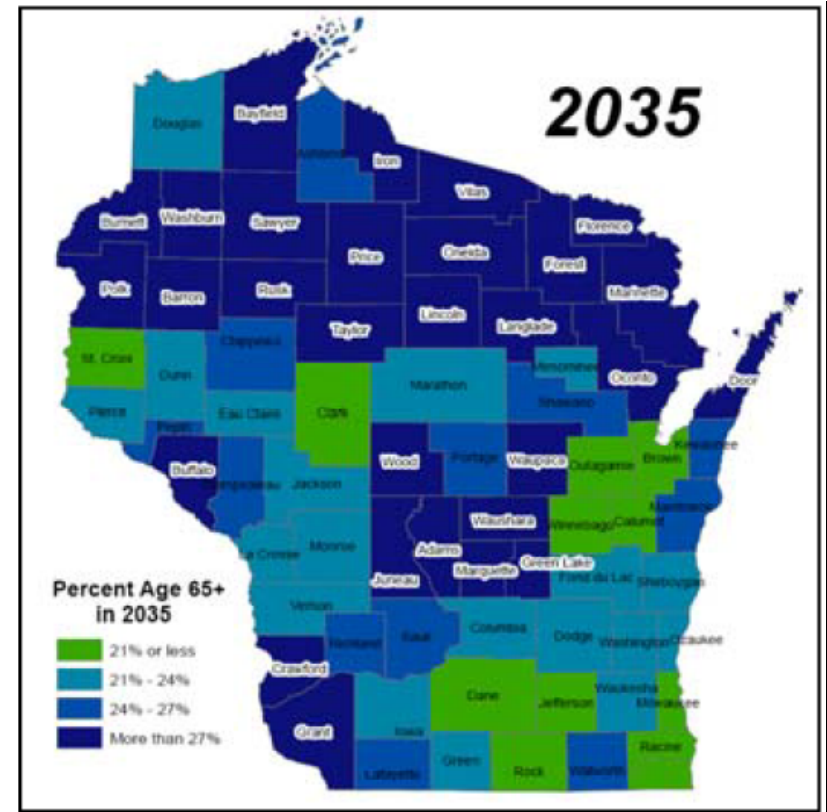
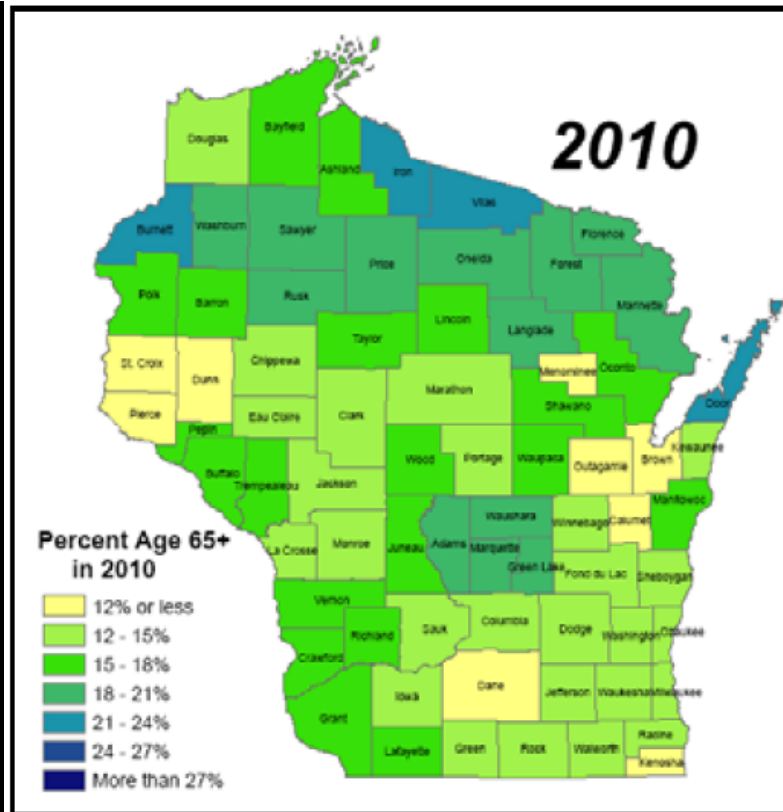
# PUBLIC HEALTH CONCERNS

## AGING DEMOGRAPHICS



- In the United States, the baby boom generation represents 76 million people.
- On January 1, 2011, as the baby boomers begin to celebrate their 65th birthdays, 10,000 people will turn 65 every day—this will continue for 20 years.
- By 2030 in the United States, about one in five persons will be over 65.

# PUBLIC HEALTH CONCERNS



- 2010 Census
  - 19% of Wisconsin's population is over the age of 60.
  - 18% of Eau Claire's population is over the age of 60
    - (31% of 65+ live alone).
- 2035 Forecasts
  - 27% of Wisconsin's population will be over the age of 60
  - 26% of Eau Claire's population will be over the age of 60

# Infrastructure Needs

Estimated 5 Year  
Investment Need:  
2.2 Trillion

Category	Total Investment Needs	Estimated Spending	Projected Shortfall
Roads & Bridges	\$930 billion	\$380.5 billion	\$549.5 billion
Transit	\$265 billion	\$74.9 billion	\$190.1 billion
Rail	\$63 billion	\$51.3 billion	\$11.7 billion
Public Parks & Recreation	\$85 billion	\$36.835 billion	\$48.17 billion
Schools	\$160 billion	\$125 billion	\$35 billion
Wastewater & Drinking Water	\$255 billion	\$146.4 billion	\$108.6 billion

*Our 2.2 trillion dollar need also includes infrastructure investment towards aviation, inland waterways, energy, dams, levees, hazardous waste and solid waste.*

Source:  
American Society of Civil  
Engineers – Report Card for  
America's Infrastructure



## Wisconsin Infrastructure Needs

- 16% of Wisconsin's bridges are structurally deficient or functionally obsolete.
- There are 189 high hazard dams in Wisconsin. A high hazard dam is defined as a dam whose failure would cause a loss of life and significant property damage.
- Wisconsin's drinking water infrastructure needs an investment of \$5.94 billion over the next 20 years.
- Wisconsin reported an unmet need of \$28.5 million for its state public outdoor recreation facilities and parkland acquisition.
- 30% of Wisconsin's major roads are in poor or mediocre condition.
- Vehicle travel on Wisconsin's highways increased by 34% from 1990 to 2007.
- Wisconsin has \$3.66 billion in wastewater infrastructure needs.
- City of Eau Claire's 5-year CIP (2012-2016) projected Public Works infrastructure costs: \$120 million (streets, water, sewer and storm).

*Source: American Society of Civil Engineers – Report Card for America's Infrastructure*

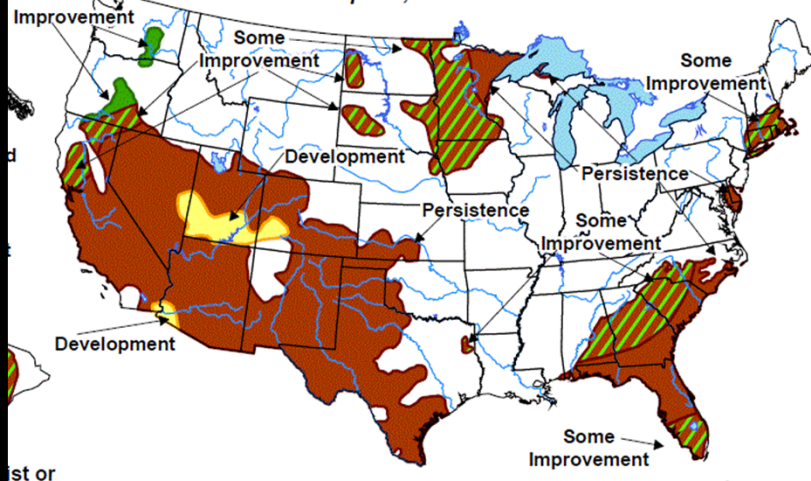


# PUBLIC HEALTH CONCERNS

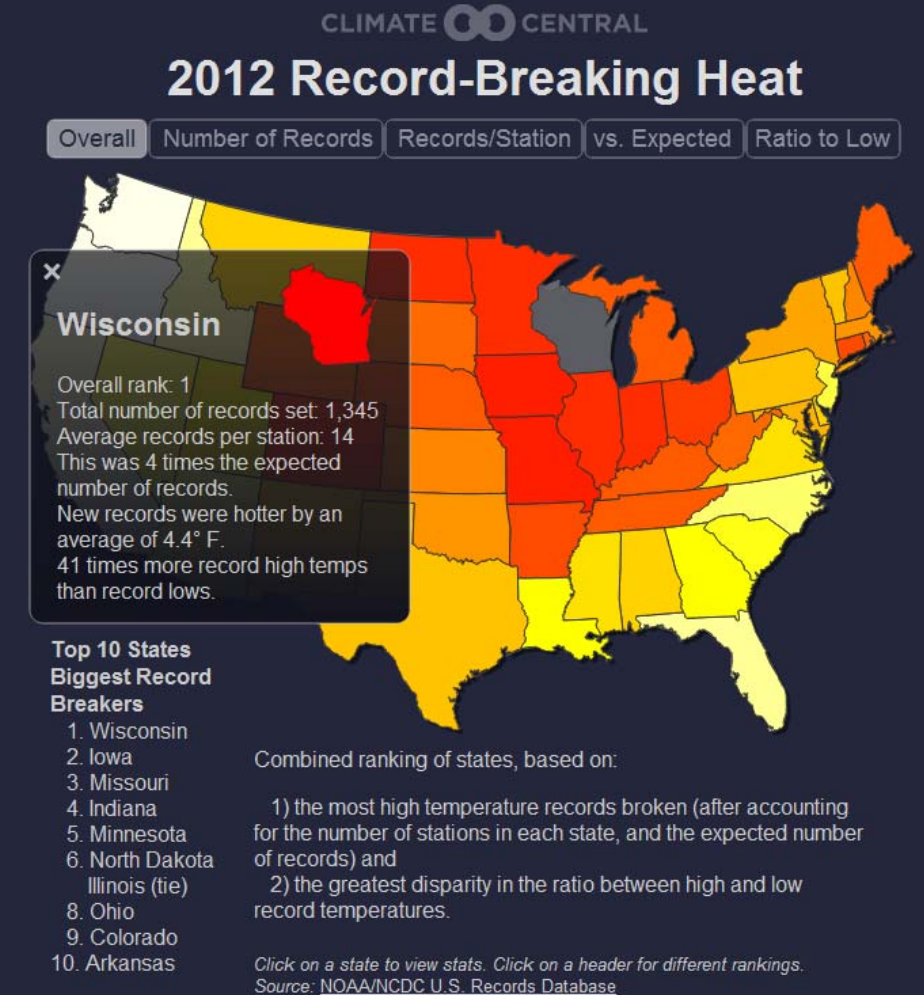
## CLIMATE CHANGE

- Extreme Heat Events
- Flooding
- Draughts
- Invasive Species

### U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid for April 5 - June 30, 2012 Released April 5, 2012



ist or



### KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely



# LINKING PUBLIC HEALTH WITH COMMUNITY PLANNING



# THE RELATIONSHIP

## Planning Issues

- Disconnected Land Use Patterns
- Land Fragmentation (Loss of farmland, open space, wetlands, etc...)
- Low Density
- Auto-Exclusive
- Auto Dependency
- Congestion
- Trail/Sidewalk Gaps
- Limited Choices
- Failing Infrastructure

Direct

and

Indirect

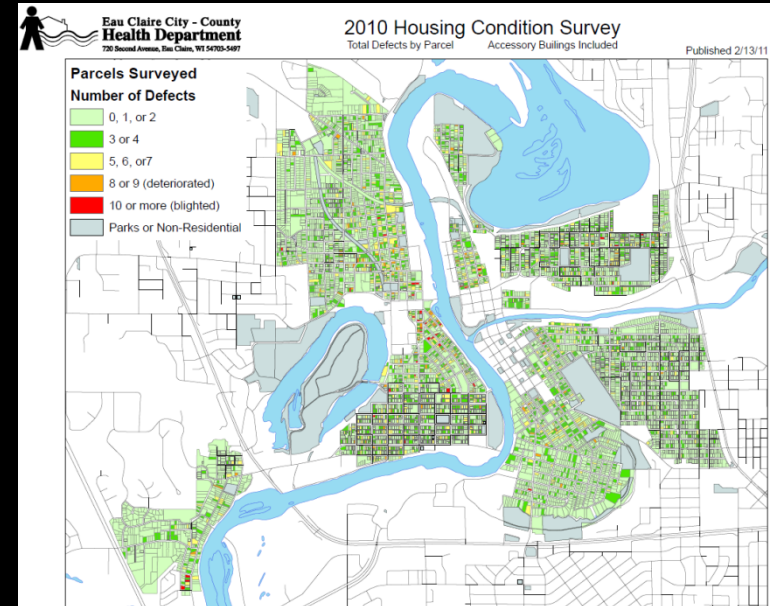
Connections

## Health Issues

- Physical Inactivity
- Poor Diet & Nutrition
- Mental Health Issues
- Decreased Social Capital
- Poor Air Quality
- Increase in Car Crashes
- Increase in Bike/Ped Injuries
- Poor Water Quality
- Obesity
- Increase in Health Care Cost



# HEALTHY & AFFORDABLE HOUSING OPTIONS



Healthy housing for all  
household sizes and  
incomes

↓ exposure to lead, radon & mold  
↑ \$ for healthy food & health care  
↓ overcrowding, instability &  
homelessness  
↓ energy & resource use and cost

Life-cycle housing

Housing-cost  
burden

Green and healthy  
buildings

Housing Assistance/Enforcement  
Programs

*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

# ACCESS TO HEALTHY & AFFORDABLE FOODS

Access to affordable healthy foods

Local food production and sales

Housing-cost burden

Traditional neighborhood development (TND)

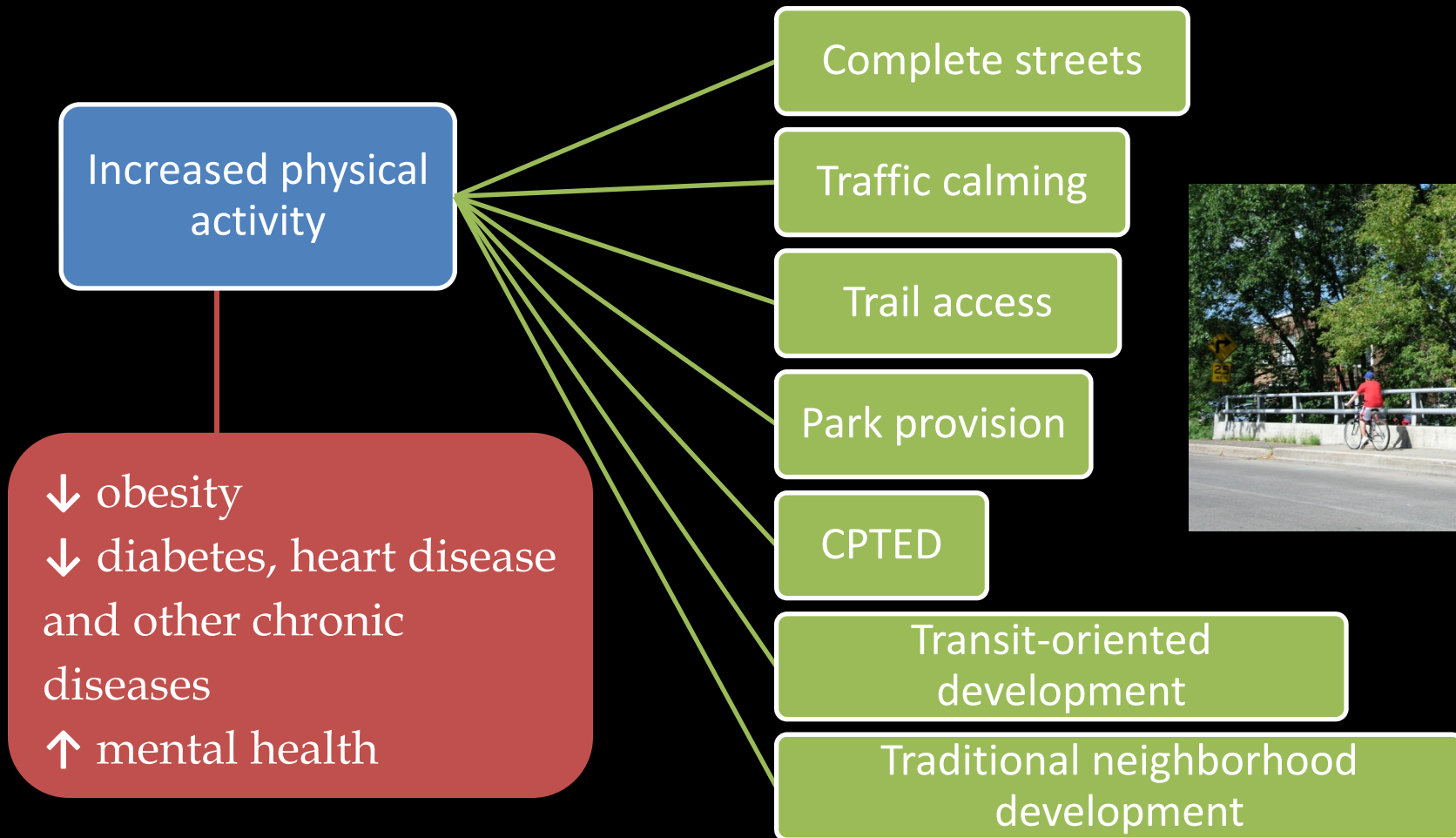
- ↑ consumption of healthy food
- ↓ obesity & diabetes
- ↑ local food production
- ↓ food travel & fossil fuel use
- ↑ physical activity & mental health benefits from gardening
- ↑ community investment

*Source: Minnesota Department of Health – Minnesota Healthy Planning: How-to-Guide*



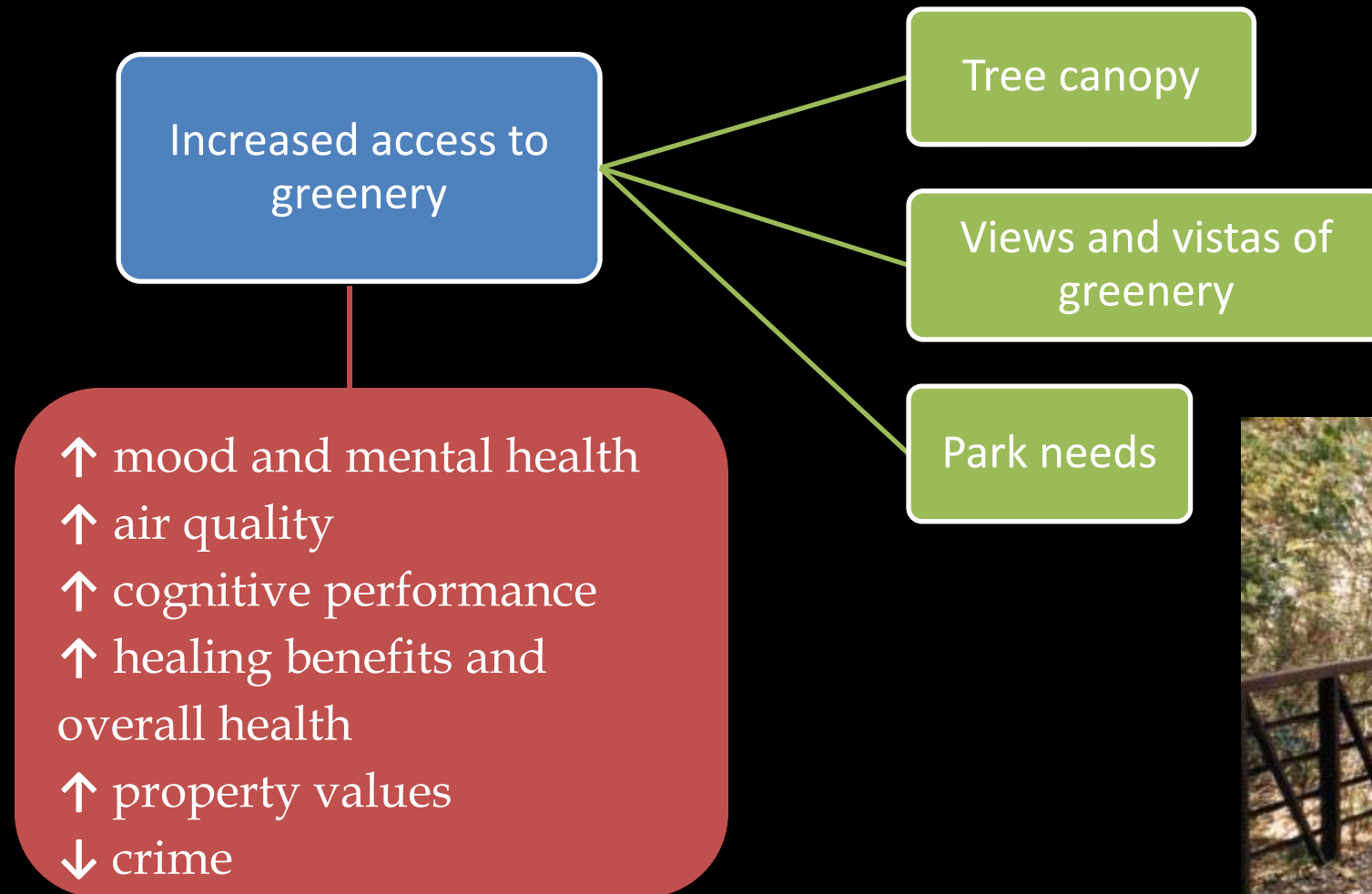
*Photo Source: Nick Meyer, Mother Earth News*

# INCREASED PHYSICAL ACTIVITY



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

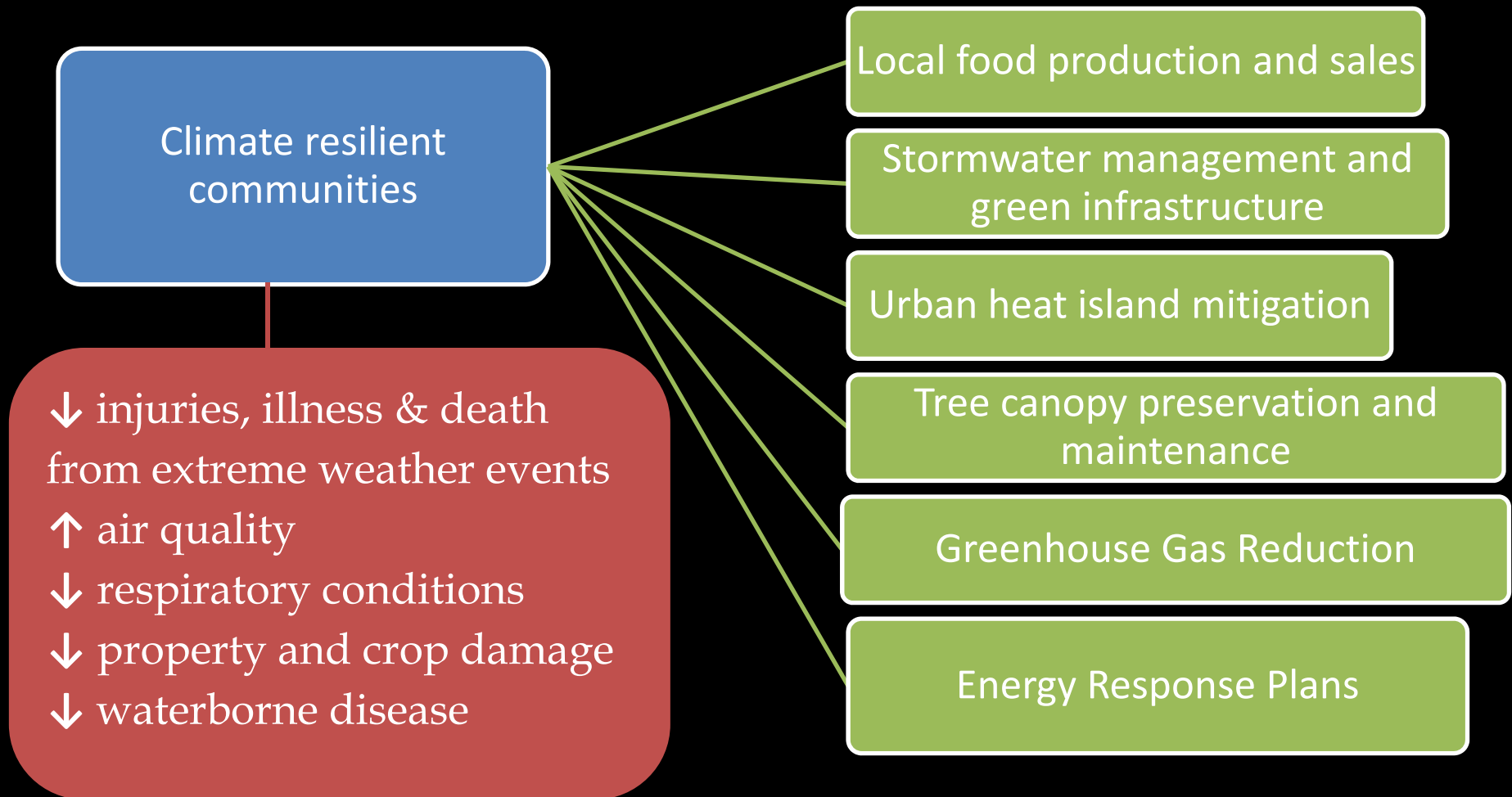
# INCREASED ACCESS TO GREENERY



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

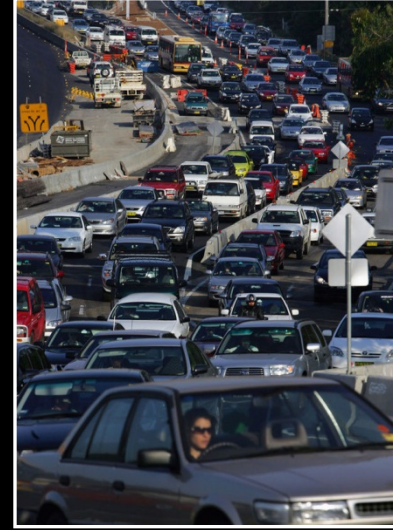


# CLIMATE RESILIENT COMMUNITIES



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

# REDUCED EXPOSURE TO AIR POLLUTANTS, HAZARDOUS MATERIALS, AND/OR NUISANCES



Reduced exposure to air pollutants, hazardous materials, nuisances

- ↓ respiratory & cardiovascular disease and hospitalizations
- ↓ cancer risk
- ↓ deaths and health care cost
- ↓ headaches, skin irritation, low birth weight, etc.
- ↓ stress and negative mental health

Brownfield cleanup and redevelopment of underutilized sites

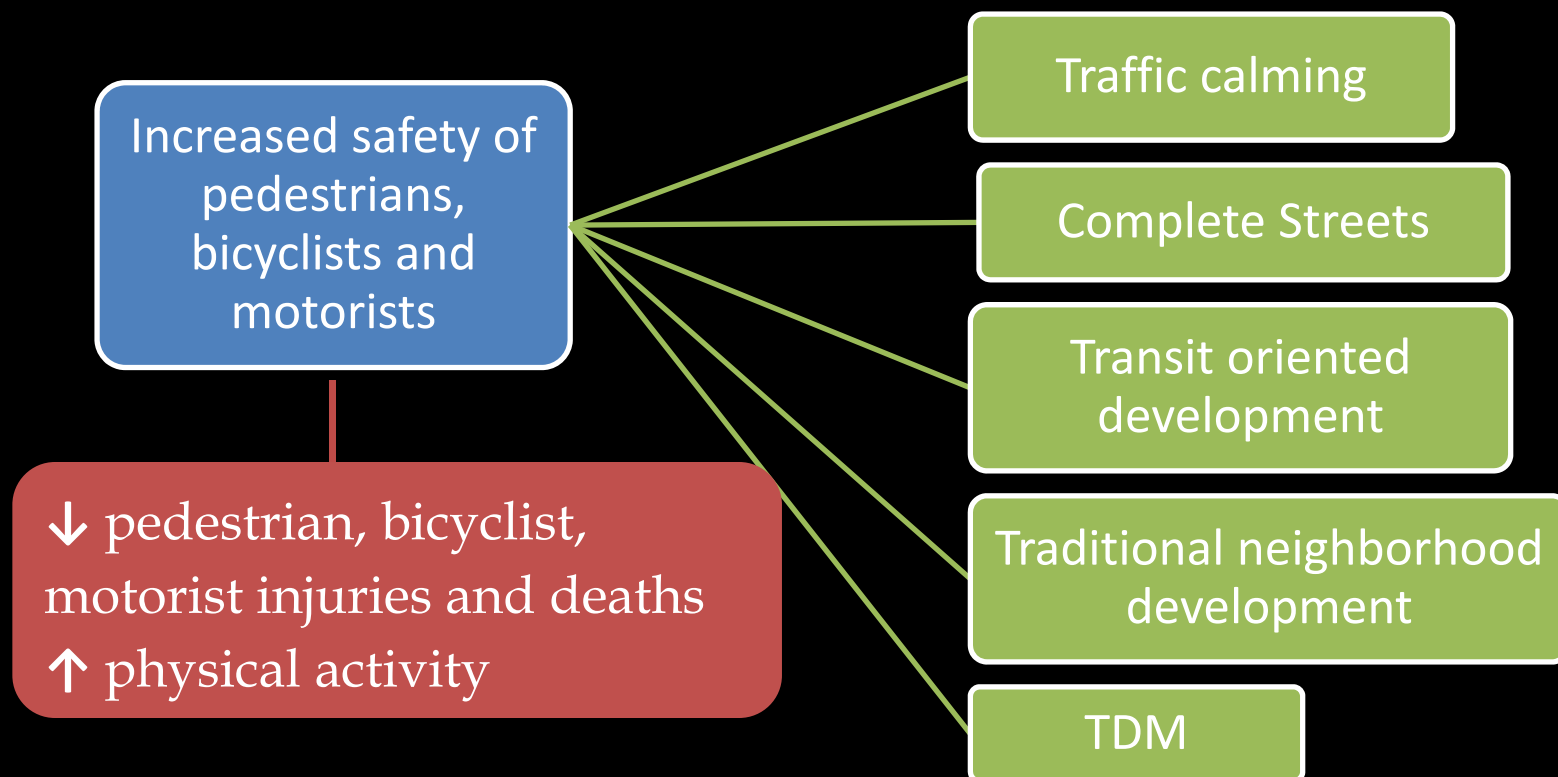
Separated incompatible uses

GHG emission reductions

Travel demand management (TDM)

*Source: Minnesota Department of Health – Minnesota Healthy Planning: How-to-Guide*

# INCREASED SAFETY OF PEDESTRIANS, BICYCLISTS, AND MOTORISTS



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

# SAFE COMMUNITIES

Safe communities

↓ crime and violence  
↑ physical activity

Crime Prevention  
Through Environmental  
Design (CPTED)

Traditional  
neighborhood  
development

Traffic calming

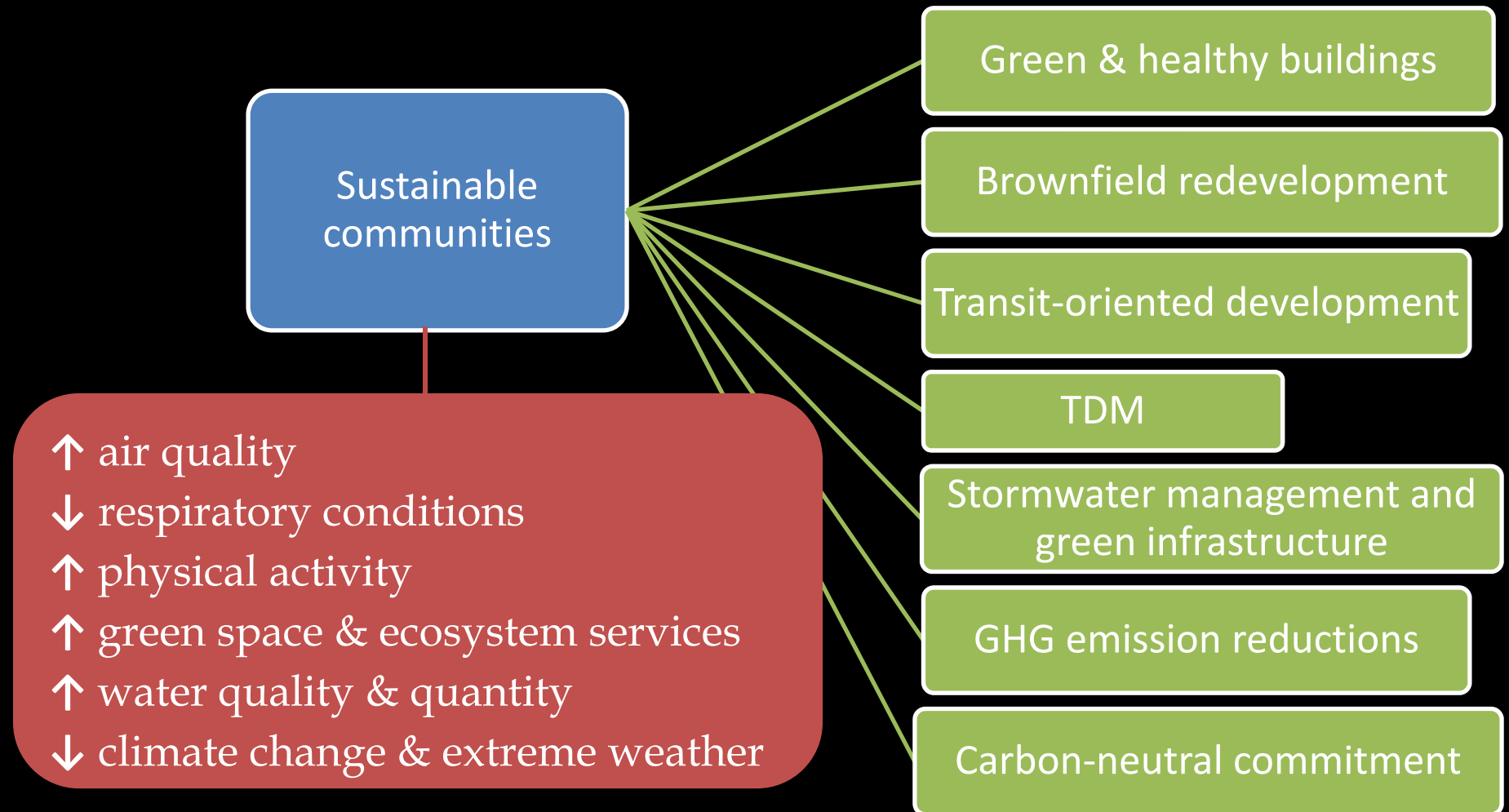
Active Streets



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*



# SUSTAINABLE COMMUNITIES



*Source: Minnesota Department of Health –  
Minnesota Healthy Planning: How-to-Guide*

# OUR DIRECT COST



- Our nation's estimated need for infrastructure improvements (water, parks, roads, bridges, schools, transit, rail) over the next 5 years is 2.2 trillion dollars.
- For every dollar that a working family saved by moving out of the urban center, it was spending 77 cents more on transportation before the petroleum prices surged in 2008.
- Poor road conditions cost U.S. motorists \$67 billion a year in repairs and operating costs--\$333 per motorist.
- A study suggest that when inactive adults increase their physical active, annual mean medical costs are reduced by \$865 per person.
- In 2007, 41,059 people were killed in motor vehicle crashes and 2,491,000 were injured. Motor vehicle crashes cost the U.S. \$230 billion per year--\$819 for each resident in medical costs, lost productivity, travel delays, workplace costs, insurance costs, and legal costs.
- The annual economic cost of obesity-related medical expenses for Wisconsin's is estimated at more than \$1.5 billion annually.
- Treatment for people with chronic conditions accounts for more than 75% of the \$2 trillion spent annually on medical care in the United States.
- Creating narrow streets (24 feet wide) versus wide streets (32 feet wide) can save up to \$30 per linear foot in street costs.

*Source: American Society of Civil Engineers – Report Card for America's Infrastructure.  
Century of the City – Rockefeller Foundation  
Center for Disease Control and Prevention  
American Society of Landscape Architects - The Sustainable Sites Initiatives – The Case for Sustainable Landscapes (2009)*

# INTEGRATING PUBLIC HEALTH INTO THE PLANNING PROCESS



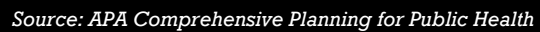


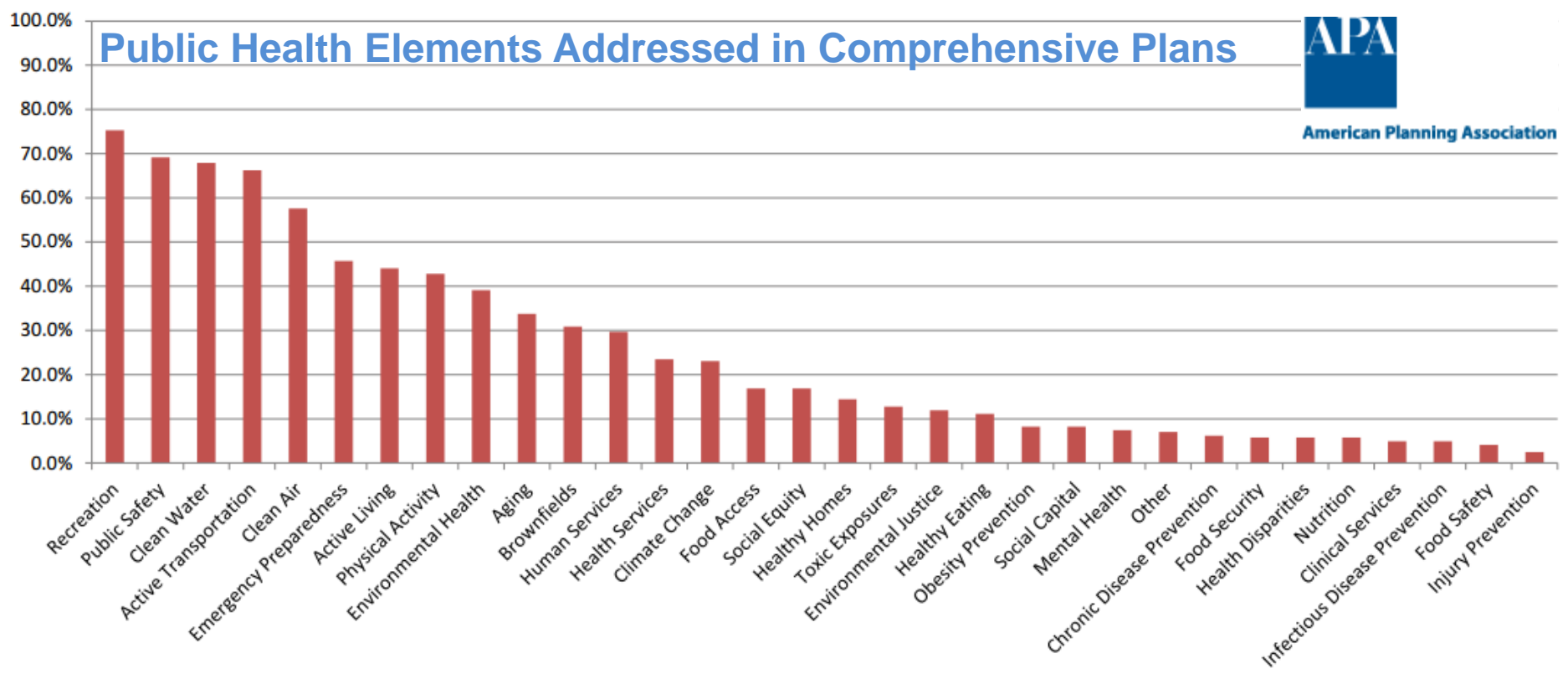
## STARTING WITH THE PLANNER'S TOOL BOX

- Comprehensive Plans
- Master Plans
- Environmental Documents (i.e. Environmental Assessments, Environmental Impact Statements)
- Policy instruments such as zoning regulations, building codes and governmental policies.
- Others....Sub division regulations, planned unit developments, design standards.



map :





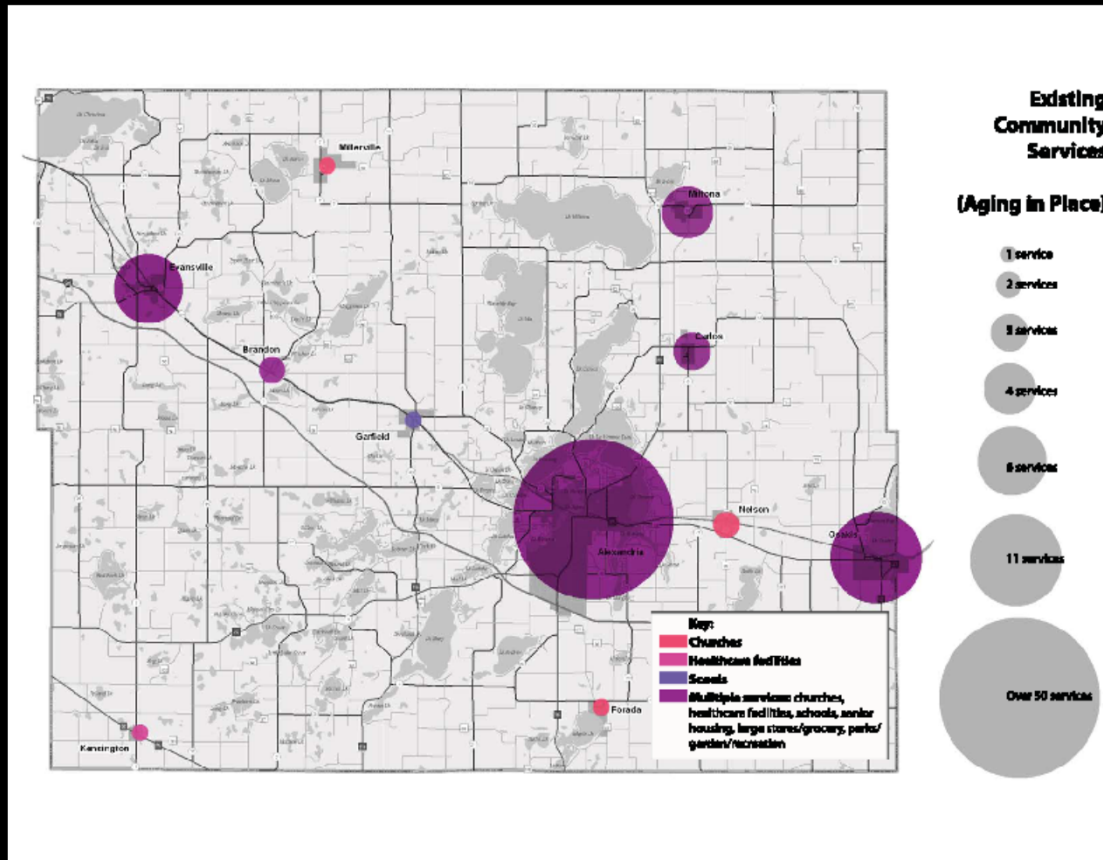
## St. Louis Park, MN

- Food licensing and inspection programs
- Air quality (e.g., asbestos, radon, carbon monoxide)
- Noise
- Water quality, (e.g., wells)
- Soil hazards (e.g., lead & contaminated sites)
- Active living

## Oneida Nation, WI

- Active living
- Climate change
- Emergency preparedness
- Food access, safety and security
- Aging (e.g., health services, healthy homes and social health)

Source: APA Comprehensive Planning for Public Health



## DOUGLAS COUNTY, MN COMPREHENSIVE PLAN UPDATE

### Health Indicators

- Assessed future demographics
- Mapped senior services
- Mapped healthcare/hospital service gaps
- Complete streets, shared street, and traffic calming concepts
- Social Capital/Social Cohesion



## DULUTH, MN 6<sup>th</sup> AVE. REDESIGN/COMPLETE STREETS POLICY

### Health Indicators

- Map traffic accidents
- Assess pedestrian/bicycle safety issues
- Neighborhood proximity to supermarkets/grocery stores
- Do local plans and regulatory tools support the complete streets policy?



## Village of Weston, WI – Alcohol Environment HIA

Recommendations included policy changes in alcohol licensing and mitigating negative economic impacts.

## Pinellas County, Florida

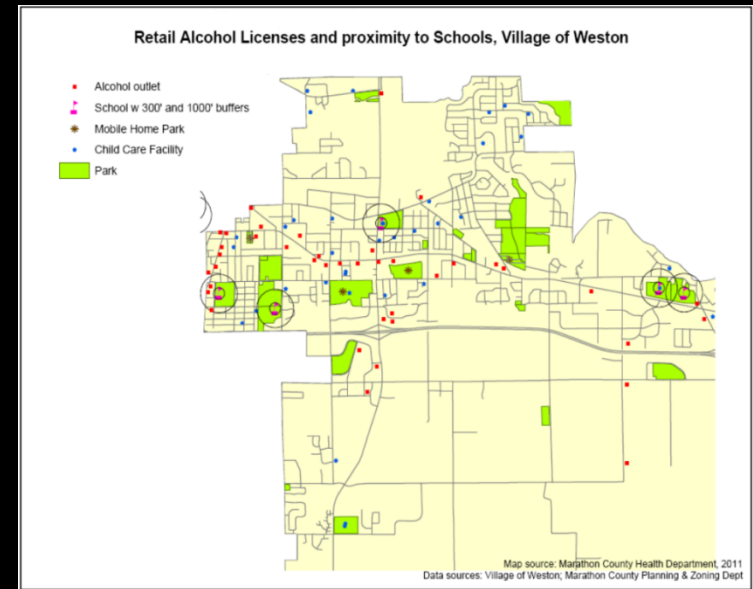
Require after school programs to provide children with at least 30 minutes of physical activity 5 days a week.

## Philadelphia, Pennsylvania

Banned the use of trans fats in food service establishments and requires menu labeling.

## Los Angeles, California

Quantitative estimate of potential mortality reduction from proposed ordinance to raise minimum wage for city contract workers or provide them with health insurance.



# CARBON FOOTPRINTING

## GREEN GRAND FORKS & GRAND FORKS/EAST GRAND FORKS TRANSPORTATION PLAN UPDATE



2009 — 2011

### Sustainability Actions and Activities

	Complete	Ongoing	
Alternative & Renewable Energy	✓		Install Small Wind Turbine
	✓		Perform Landfill Methane-to-Electricity Feasibility Study
		✓	Perform Biomass-Generated Power Feasibility Study
	✓		Incorporate Alternative Energy Investigation into the Combined Waste Management Study Proposed for 2009/2010
Economic Development		✓	Implement Green Business Showcase
		✓	Work with the Grand Forks Region Economic Development Corporation and Local Educational Institutions to Create a Plan for Green Collar Job Growth
		✓	Initiate Partner Discussion on Education-to-Employment Paths for Green Industry
Greenhouse Gases	✓		Complete Baseline Greenhouse Gas Inventory
		✓	Update Greenhouse Gas Inventory Periodically
Land Use		✓	Encourage Walkable/Bikeable Urban Communities
		✓	Consider Policies to Preserve Open Space, Farmland and Natural Beauty
		✓	Consider Policies to Promote High Density Communities
	✓		Incorporate Sustainability into City's 2040 Land Use Plan
		✓	Consider Policies to Preserve and Create Green Space
Local, State & Federal Policy	✓		Adopt Energy Building Code
		✓	Support City Policies to Increase "Efficiency in Government Management"
		✓	Support Federal and State Climate Protection and Energy Efficiency Legislation that will Promote Local Action
Municipal Buildings & Facilities		✓	Upgrade Lights to Energy Efficient Options
		✓	Perform Energy Efficiency Upgrades to Existing Buildings
	✓		Initiate Public Building Energy Audits
		✓	Establish City "Green Team"
Public Education & Outreach		✓	Promote and Participate in Community Collaborations and Public Awareness Festivals
		✓	Coordinate Specific Media Campaigns
	✓		Implement Residential Energy Efficiency Program
		✓	Create Sustainability Website
Recycling & Urban Forestry		✓	Evaluate a Future Pay-As-You-Throw System
		✓	Investigate Concept of Demolition Reuse
		✓	Expand Recycling Options
		✓	Involve Community in Urban Forestry/Tree Planting
		✓	Promote and Expand Use of Greenway
Transportation	✓		Set Reduction Targets for Fleet Size and Vehicle Sizes
		✓	Increase Public Transportation Ridership
	✓		Investigate Alternative Fuel Options
		✓	Facilitate Bicycle and Bus/Bicycle Programs
	✓		Improve Traffic Signal Synchronization

#### Grand Forks - East Grand Forks Carbon Footprinting Passenger Cars and Light Trucks by VMT 2006 - 2010 Change Based on Daily Vehicle Miles Traveled

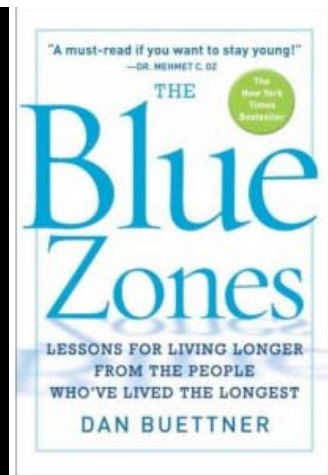
Min: The reduction of VMT is: 3,796,000  
Max: The reduction of VMT is: 4,270,500

Min: The reduction in gallons of fuel consumed by passenger cars and light trucks is: 189,421  
Max: The reduction in gallons of fuel consumed by passenger cars and light trucks is: 213,099

Min: The reduction of the greenhouse gas emissions is: 1,684 metric tons of Carbon Dioxide  
Max: The reduction of the greenhouse gas emissions is: 1,895 metric tons of Carbon Dioxide

Min. Range	Max. Range	Five Year Carbon Fo
-331	-371	Annual CO <sub>2</sub> emissions from the number of passenger vehicles.
-188,785	-212,383	CO <sub>2</sub> emissions from the number of gallons of gasoline consumed.
-3,916	-4,406	CO <sub>2</sub> emissions from the number of barrels of oil consumed.
-23	-25	CO <sub>2</sub> from the number of tanker truck's worth of gasoline.
-9	-10	CO <sub>2</sub> emissions from burning of the number of railcars' worth of coal.

## BLUE ZONES PILOT PROJECT (2009)



Source: [www.aarp.org](http://www.aarp.org) – Kevin J. Miyazaki/Redux

### Community Successes

- Went from 14% to 23% of employees in tobacco free worksites
- Established tobacco free multi-unit housing
- Added a Blue Zones® Checkout Lane that only offers healthy “grab and go” options at the local Hy-Vee
- Improved nutrition in schools with a healthy snack cart, Farm to School efforts, school gardens and more improved vending policies
- Continued Walking School Buses
- Increased community activity with additional bike lanes, a new boat house with rental equipment, 18-hole disc golf and adaptive swings at the park
- Drove community volunteerism and improvement – especially through mural painting on cinderblock buildings
- Held Purpose Workshops
- Provided annual worksite wellness awards
- Increased community outreach and more business partners
- Life expectancy increased an average of 3.1 years
- Participants lost a collective 12,000 pounds
- An average 21% drop in absenteeism by key employers
- City employees showed a 40% decrease in health care costs

Source: <http://www.bluezones.com/2012/07/albert-lea-mn-where-are-they-now/>



# BE INNOVATIVE





# MOVING FORWARD

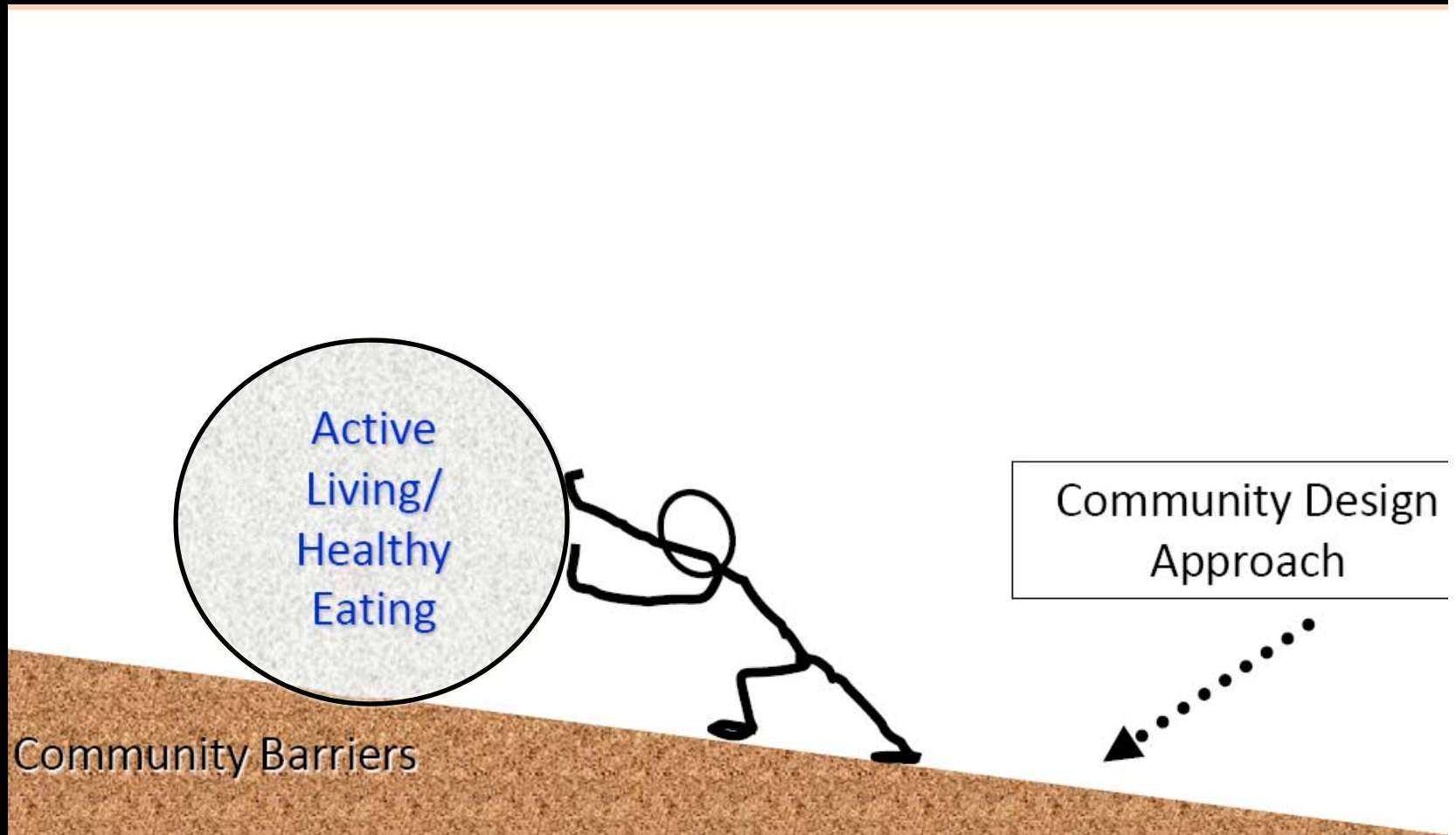


Everyone thinks about health differently.

## Previous Approach: Individual responsibility



## Better approach: Individual in Healthier Environment



# MOVING FORWARD

## Collaborate Collaborate Collaborate

- The Public
- Land Use Planners
- Environmental Planners
- Transportation Officials
- Municipal Planners
- County/Regional Planners
- Elected and Appointed Officials
- Public Health Officials
- Engineers
- Community Developers
- Park & Recreation Planners
- Business Owners
- Stakeholders





# THANK YOU



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**As you move forward.... think health.**

